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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/733,861	12/11/2003	Frederic Hayem	RONI-019/01US	8099
23446	7590	09/08/2006	EXAMINER	
MCANDREWS HELD & MALLOY, LTD			CASCA, FRED A	
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SUITE 3400				
CHICAGO, IL 60661			2617	

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/733,861	HAYEM ET AL.	
	Examiner Fred A. Casca	Art Unit 2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

- 1) Responsive to communication(s) filed on 27 June 2006.
- 2a) This action is **FINAL**.                            2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

- 4) Claim(s) 1-28 is/are pending in the application.
  - 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) 27 and 28 is/are allowed.
- 6) Claim(s) 1-7, 12-19, 22, 23 and 26 is/are rejected.
- 7) Claim(s) 8-11, 20, 21, 24 and 25 is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.
 

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) All    b) Some \* c) None of:
    1. Certified copies of the priority documents have been received.
    2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

<ol style="list-style-type: none"> <li>1)<input checked="" type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2)<input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3)<input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.</li> </ol>	<ol style="list-style-type: none"> <li>4)<input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.</li> <li>5)<input type="checkbox"/> Notice of Informal Patent Application (PTO-152)</li> <li>6)<input type="checkbox"/> Other: _____.</li> </ol>
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## DETAILED ACTION

1. This action is in response to applicant's amendment filed on June 27, 2006. Claims 1-28 are still pending in the present application. **This Action is made FINAL.**
2. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the examiner disagrees with the applicant because each of the three reference (Neumann, Schmidt and Kransmo) teaches a multi-mode device with at least two processing units.
3. In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7, 12-19, 22-23, and 26 rejected under 35 U.S.C. 103(a) as being unpatentable over Neumann et al (U.S. Pub. No. 2002/0141441 A1), in view of Schmidt (US Pub. No. 2003/0067894 A1) and further in view of Kransmo (US Patent No. 6,594,424 B1).

Referring to claim 1, Neumann discloses a multi-mode wireless communication device (abstract, and paragraph 0004, “dual mode”, telephone have been developed, in which the telephone is useable in two networks),

comprising a first baseband co-processor configured to execute wireless communications protocol employed within a first wireless communications network (figures 2-8B, paragraphs 0019-0021, “first and second baseband processors”, “GSM”, “TDMA”);

a host baseband processor configured to execute a set of protocol stack operations of a second wireless communications protocol employed within a second wireless communications network and higher-level stack operations of said first wireless communications protocol (figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “first and second baseband processors”, “GSM”, “TDMA”),

and a data communication channel between said host baseband processor and said first baseband co-processor capable of carrying data received by said multi-mode wireless communication device from said first wireless communications network or sent by said multi-mode wireless communication device through said first wireless communications network (figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “logic interface unit for voice data during a voice call couples the GSM master processor to the TDMA co-processor”).

Additionally, Neumann inherently discloses that the baseband co-processor is configured to execute **low-level stack operations of a first wireless communications protocol** (paragraphs

6, 9 19-21, 38, 34, 30, 25, note that the first processor is capable of handling GSM operations according to GSM protocol, so it operates the stack operations of a GSM network protocol. Note that the language of the claim does not limit the processor only to the low-level stack operations).

Neumann does not specifically disclose baseband co-processor configured to execute **low-level stack operations of a first** wireless communications protocol.

Schmidt discloses baseband co-processor configured to execute **low-level stack operations of a first** wireless communications protocol (Figures 1A-2, abstract, paragraphs 0004, 0010-0011, 23-25, 27-29, 31, 35, 40, 44-46, 49, and 51, “TCP/IP”, “HTML”, “HTTP”, “processor 220”, “short-range wireless transceiver”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the device of Neumann, by incorporating the teachings of Schmidt into that of Neumann, and consequently providing the co-processor configured to execute low-level stack operations of a first wireless communications protocol, motivation being for the purpose of allowing the dual-mobile terminal to work with different networks, distributing the stack operations of the protocols between processors, and consequently providing efficiency and faster execution of operations.

The combination of Neumann/Schmidt/Kransmo does not specifically disclose one or both of said first baseband co-processor and said host baseband processor enabling switching between bearers utilizing low-level stack operations and set of protocol stack operations and maintaining bearer connections during switching.

Kransmo discloses one or both of first baseband co-processor and host baseband processor enabling switching between bearers utilizing low-level stack operations and set of protocol stack operations and maintaining bearer connections during switching (abstract, col. 1, lines 37-67, col. 2, lines 1-67, col. 3, lines 35-50, and col. 4, lines 10-20 and 30-56, “dual-mode”, “dual-mode wireless mobile . . . that operate in both 2G and 3G”, “handover and roaming of a wireless terminal from a third generation . . . to a second generation (2G) communication system”, “operating protocols”, note that a dual-mode mobile terminal capable of operating and roaming in two different systems is provided. Inherently during the roaming process from a 3G system to a 2G system the dual-mobile terminal switches communication operations from a first processor that processes communications of 3G type to a second processor that processes communications of a 2G type so that the call is successfully handed over. Hence, at least one of the processors enables switching between bearers (protocols) utilizing low-level stack operations (e.g., 3G operations) and a set of protocol stack operations (e.g., 2G operations) and maintaining bearer connections during switching (during a soft handoff which is inherent with WCDMA systems the initial connection is maintained until the new connection is firmly established). Further note that synchronization takes place between the two different systems. In order for this synchronization to take place, the processor processing the 3G communications inherently sends timing information to the processor that processes the 2G communications, thus synchronization between two systems takes place on the basis of timing information transferred from the 3G processor to the 2G processor).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of Neumann/Schmidt by incorporating the teachings of Kransmo and

consequently providing one or both of first baseband co-processor and host baseband processor to enable switching between bearers utilizing low-level stack operations and set of protocol stack operations and maintain bearer connections during switching, for the purpose allowing the multi-mode wireless device to switch efficiently between different wireless communication protocols and consequently different wireless communication systems.

Referring to claim 2, the combination of Neumann/Schmidt/Kransmo disclose the device of claim 1, and further disclose the set of protocol stack operations comprises a complete set of protocol stack operations of said second wireless communications protocol (Neumann, figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “first and second baseband processors”, “GSM”, “TDMA”).

Referring to claim 3, the combination of Neumann/Schmidt/Kransmo disclose the device of claim 1.

Neumann does not disclose a second baseband processor in communication with said host baseband processor via said data communication channel, said second baseband processor being configured to execute low-level stack operations of said second wireless communications protocol.

Schmidt discloses second baseband processor in communication with a host baseband processor via a data communication channel, said second baseband processor being configured to execute low-level stack operations of said second wireless communications protocol (Figures 1A-2, abstract, paragraphs 0004, 0010-0011, 23-25, 27-29, 31, 35, 40, 44-46, 49, and 51).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the device of Neumann, by incorporating the teachings of Schmidt into that

of Neumann/Kransmo, motivation being to distribute the stack operations of the protocols between processors, and consequently providing efficiency and faster execution of operations.

Referring to claim 4, the combination of Neumann/Schmidt/Kransmo disclose the device of claim 3, and further disclose the set of protocol stack operations comprises higher-level protocol stack operations of said second wireless communications protocol (Neumann, figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “logic interface unit for voice data during a voice call couples the GSM master processor to the TDMA co-processor”).

Referring to claim 5, the combination of Neumann/Schmidt/Kransmo disclose the device of claim 1, and further disclose the low-level stack operations include physical layer functions and bearer-specific stack functions peculiar to said first wireless communications protocol (Schmidt, figures 1A-2, abstract, paragraphs 4, 10-11, 23-25, 27-29, 31, 35, 40, 44-46, 49, and 51).

Referring to claim 6, the combination of Neumann/Schmidt/Kransmo disclose the device of claim 5, and further disclose higher-level stack functions comprise stack functions common to said first and second wireless communication protocols (Neumann, figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025).

Referring to claim 7, the combination of Neumann/Schmidt/Kransmo disclose the device of claim 1, and further disclose host baseband processor is further configured to execute application-layer functions (figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025).

Referring to claim 12, the combination of Neumann/Schmidt/Kransmo disclose the device of claim 1, and further disclose first wireless communications protocol comprises

WCDMA and said second wireless communications protocol comprises GSM (Schmidt, abstract, and paragraphs 4, and 25).

Referring to claim 13, Neumann discloses a method performed in a wireless communication device disposed for communication with first and second wireless communications networks in accordance with first and second wireless communication protocols, respectively (abstract, and paragraph 0004, and 19-20“dual mode”, telephone have been developed, in which the telephone is useable in two networks), said method comprising executing of said first wireless communications protocol within a first baseband co-processor (figures 2-8B, paragraphs 0019-0021, “first and second baseband processors”, “GSM”, “TDMA”); executing a set of protocol stack operations of a second wireless communications protocol and higher-level stack operations of said first wireless communications protocol within a host baseband processor (figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “first and second baseband processors”, “GSM”, “TDMA”); and establishing a data communication channel between said host baseband processor and said first baseband co-processor capable of carrying data received by said wireless communication device from said first wireless communications network or sent by said wireless communication device through said first wireless communications network (figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “logic interface unit for voice data during a voice call couples the GSM master processor to the TDMA co-processor”).

Neumann does not specifically disclose executing **low-level stack operations** of said first wireless communications protocol within a first baseband co-processor.

Schmidt discloses baseband co-processor configured to execute **low-level stack operations of a first** wireless communications protocol (Figures 1A-2, abstract, paragraphs 0004, 0010-0011, 23-25, 27-29, 31, 35, 40, 44-46, 49, and 51, “TCP/IP”, “HTML”, “HTTP”, “processor 220”, “short-range wireless transceiver”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the method of Neumann, by incorporating the teachings of Schmidt into that of Neumann, and consequently providing executing **low-level stack operations** of said first wireless communications protocol within a first baseband co-processor, motivation being to distribute the stack operations of the protocols between processors, and consequently providing efficiency and faster execution of operations.

The combination of Neumann/Schmidt does not specifically disclose switching between bearers utilizing low-level stack operations and set of protocol stack operations and maintaining bearer connections during switching.

Kransmo discloses switching between bearers utilizing low-level stack operations and set of protocol stack operations and maintaining bearer connections during switching (abstract, col. 1, lines 37-67, col. 2, lines 1-67, col. 3, lines 35-50, and col. 4, lines 10-20 and 30-56, “dual-mode”, “dual-mode wireless mobile . . . that operate in both 2G and 3G”, “handover and roaming of a wireless terminal from a third generation . . . to a second generation (2G) communication system”, “operating protocols”, note that a dual-mode mobile terminal capable of operating and roaming in two different systems is provided. Inherently during the roaming process from a 3G system to a 2G system the dual-mobile terminal switches communication operations from a first processor that processes communications of 3G type to a second processor that processes

communications of a 2G type so that the call is successfully handed over. Hence, at least one of the processors enables switching between bearers (protocols) utilizing low-level stack operations (e.g., 3G operations) and a set of protocol stack operations (e.g., 2G operations) and maintaining bearer connections during switching (during a soft handoff which is inherent with WCDMA systems the initial connection is maintained until the new connection is firmly established). Further note that synchronization takes place between the two different systems. In order for this synchronization to take place, the processor processing the 3G communications inherently sends timing information to the processor that processes the 2G communications, thus synchronization between two systems takes place on the basis of timing information transferred from the 3G processor to the 2G processor).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of Neumann/Schmidt by incorporating the teachings of Kransmo and consequently providing one or both of first baseband co-processor and host baseband processor to enable switching between bearers utilizing low-level stack operations and set of protocol stack operations and maintain bearer connections during switching, for the purpose allowing the multi-mode wireless device to switch efficiently between different wireless communication protocols and consequently different wireless communication systems.

Referring to claim 14, the combination of Neumann/Schmidt/Kransmo disclose the method of claim 13, and further disclose executing said set of protocol stack operations comprise executing a complete set of protocol stack operations of said second wireless communications protocol (Neumann, figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “first and second baseband processors”, “GSM”, “TDMA”).

Referring to claim 15, the combinations of Neumann/Schmidt/Kransmo disclose the method of claim 13.

Neumann does not disclose executing low-level stack operations of said second wireless communications protocol.

Schmidt discloses executing low-level stack operations of said second wireless communications protocol (Figures 1A-2, abstract, paragraphs 0004, 0010-0011, 23-25, 27-29, 31, 35, 40, 44-46, 49, and 51).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the method of Neumann, by incorporating the teachings of Schmidt into that of Neumann, motivation being to distribute the stack operations of the protocols between processors, and consequently providing efficiency and faster execution of operations.

Referring to claim 16, the combination of Neumann/Schmidt/Kransmo disclose the method of claim 15, and further disclose executing said set of protocol stack operations comprises executing higher-level protocol stack operations of said second wireless communications protocol (Neumann, figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “logic interface unit for voice data during a voice call couples the GSM master processor to the TDMA co-processor”).

Referring to claim 17, the combination of Neumann/Schmidt/Kransmo disclose the method of claim 13, and further disclose executing said low-level stack operations comprises executing physical layer functions and bearer-specific stack functions related to said first wireless communications protocol (Schmidt, figures 1A-2, abstract, paragraphs 4, 10-11, 23-25, 27-29, 31, 35, 40, 44-46, 49, and 51).

Referring to claim 18, the combination of Neumann/Schmidt/Kransmo disclose the method of claim 17, and further disclose executing higher-level stack functions includes executing stack functions common to said first and second wireless communication protocols (Neumann, figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025).

Referring to claim 19, Neumann disclose a multi-mode wireless communication device (abstract, and paragraph 0004, “dual mode”, telephone have been developed, in which the telephone is useable in two networks), comprising a first bearer-specific processor configured to execute of a first wireless communications protocol employed within a first wireless, communications network (figures 2-8B, paragraphs 0019-0021, “first and second baseband processors”, “GSM”, “TDMA”, note that a baseband co-processor is a bearer-specific processor); a second bearer-specific processor configured to execute operations of a second, wireless communications protocol employed within a second wireless communications network (figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “first and second baseband processors”, “GSM”, “TDMA”, note that a baseband processor is a bearer-specific processor); a primary processor configured to execute higher-level stack operations common to said first and second wireless communications protocols (figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “first and second baseband processors”, “GSM”, “TDMA”, note that the second baseband processor that is a second bearer-specific processor also is the primary processor); a radio transceiver (Figures 1-8); and means for communicating data between the radio transceiver, the primary processor, the first bearer-specific processor and the second bearer-specific processor (figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “logic interface unit for voice data during a voice call couples the GSM master processor to the TDMA co-processor”).

Neumann does not specifically disclose **low-level stack operations**.

Schmidt discloses baseband co-processor configured to execute **low-level stack operations of a first** wireless communications protocol (Figures 1A-2, abstract, paragraphs 0004, 0010-0011, 23-25, 27-29, 31, 35, 40, 44-46, 49, and 51, “TCP/IP”, “HTML”, “HTTP”, “processor 220”, “short-range wireless transceiver”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the device of Neumann, by incorporating the teachings of Schmidt into that of Neumann, and consequently providing a first bearer-specific processor configured to execute **low-level stack operations** of a first wireless communications protocol employed within a first wireless, communications network; a second bearer-specific processor configured to execute **low-level stack operations** of a second, wireless communications protocol employed within a second wireless communications network, motivation being to distribute the stack operations of the protocols between processors, and consequently providing efficiency and faster execution of operations.

Referring to claim 23, Neumann discloses a multi-mode wireless communication device (abstract, and paragraph 0004, “dual mode”, telephone have been developed, in which the telephone is useable in two networks), comprising a first integrated circuit configured to execute operations of a first wireless communications protocol employed within a first wireless communications network (figures 2-8B, paragraphs 0019-0021, “first and second baseband processors”, “GSM”, “TDMA”); a second integrated circuit configured to execute operations of a second wireless communications protocol employed within a second wireless communications network (figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “first and second

baseband processors”, “GSM”, “TDMA”); a integrated circuit configured to execute higher-level stack operations of said first wireless communications protocol and of said second wireless communications protocol (figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “first and second baseband processors”, “GSM”, “TDMA”); a first data communications channel between integrated circuits (figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025, “logic interface unit for voice data during a voice call couples the GSM master processor to the TDMA co-processor”); a second data communications channel between said **second** integrated circuit and said **third** integrated circuit.

Neumann does not specifically disclose a circuit configured to execute **low-level stack** operations, a **third** integrated circuit, and a first data communications channel between said **first** integrated circuit and said **third** integrated circuit; and a second data communications channel between said **second** integrated circuit and said **third** integrated circuit.

Schmidt discloses a circuit configured to execute **low-level stack** operations, a **third** integrated circuit, and a first data communications channel between said **first** integrated circuit and the **third** integrated circuit; and a second data communications channel between the **second** integrated circuit and the **third** integrated circuit (Figures 1A-2, abstract, paragraphs 0004, 0010-0011, 23-25, 27-29, 31, 35, 40, 44-46, 49, and 51, “TCP/IP”, “HTML”, “HTTP”, “processor 220”, “short-range wireless transceiver”, “DSP Processor 310”, “320”, “330”).

It would have been obvious to one of the ordinary skill in the art at the time of the invention to modify the device of Neumann, by incorporating the teachings of Schmidt into that of Neumann, and consequently providing a circuit configured to execute **low-level stack** operations of a first wireless communications protocol employed within a first wireless

communications network; a second integrated circuit configured to execute **low-level stack** operations of a second wireless communications protocol employed within a second wireless communications network; a **third** integrated circuit configured to execute higher-level stack operations of said first wireless communications protocol and of said second wireless communications protocol; a first data communications channel between said **first** integrated circuit and said **third** integrated circuit; and a second data communications channel between said **second** integrated circuit and said **third** integrated circuit, motivation being for the purpose of distributing the stack operations of the protocols between processors, and consequently providing efficiency and faster execution of operations.

The combination of Neumann/Schmidt does not specifically disclose one or both of said first baseband co-processor and said host baseband processor enabling switching between bearers utilizing low-level stack operations and set of protocol stack operations and maintaining bearer connections during switching.

Kransmo discloses one or both of first baseband co-processor and host baseband processor enabling switching between bearers utilizing low-level stack operations and set of protocol stack operations and maintaining bearer connections during switching (abstract, col. 1, lines 37-67, col. 2, lines 1-67, col. 3, lines 35-50, and col. 4, lines 10-20 and 30-56, “dual-mode”, “dual-mode wireless mobile . . . that operate in both 2G and 3G”, “handover and roaming of a wireless terminal from a third generation . . . to a second generation (2G) communication system”, “operating protocols”, note that a dual-mode mobile terminal capable of operating and roaming in two different systems is provided. Inherently during the roaming process from a 3G system to a 2G system the dual-mobile terminal switches communication operations from a first

processor that processes communications of 3G type to a second processor that processes communications of a 2G type so that the call is successfully handed over. Hence, at least one of the processors enables switching between bearers (protocols) utilizing low-level stack operations (e.g., 3G operations) and a set of protocol stack operations (e.g., 2G operations) and maintaining bearer connections during switching (during a soft handoff which is inherent with WCDMA systems the initial connection is maintained until the new connection is firmly established). Further note that synchronization takes place between the two different systems. In order for this synchronization to take place, the processor processing the 3G communications inherently sends timing information to the processor that processes the 2G communications, thus synchronization between two systems takes place on the basis of timing information transferred from the 3G processor to the 2G processor).

It would have been obvious to one of the ordinary skill in the art at the time of invention to modify the system of Neumann/Schmidt by incorporating the teachings of Kransmo and consequently providing one or both of first baseband co-processor and host baseband processor to enable switching between bearers utilizing low-level stack operations and set of protocol stack operations and maintain bearer connections during switching, for the purpose allowing the multi-mode wireless device to switch efficiently between different wireless communication protocols and consequently different wireless communication systems.

Referring to claim 22, the combination of Neumann/Schmidt/Kransmo disclose device of claims 19, and further disclose primary processor and is further configured to execute application-layer functions (Neumann, figures 2-8B, paragraphs 0019-0021, 0038, 0034, 0030, 0025).

Referring to claim 26, the combination of Neumann/Schmidt/Kransmo disclose device of claim 23, and further disclose third integrated circuit is further configured to execute application-layer functions (Schmidt, figures 1A-2, abstract, paragraphs 4, 10-11, 23-25, 27-29, 31, 35, 40, 44-46, 49, and 51).

***Allowable Subject Matter***

6. Claims 27 and 28 are allowed.
7. Claims 8-11, 20-21 and 24-25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

8. Applicant's arguments with respect to claims 1-26 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred A. Casca whose telephone number is (571) 272-7918. The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid, can be reached at (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

1.

EDAN ORGAD  
PATENT EXAMINER/TELECOMM.

*ed orgad 9/5/08*